[0105] Further, although both the first and the second electronic apparatuses **210** and **250** have been illustrated and explained as being configured as the smart phones having the IR modules **211** and **251** and the WiFi modules **230** and **270**, respectively, the exemplary embodiments is not limited thereto. For example, the receiving party's first electronic apparatus **210** may be configured as a smart phone, a mobile phone, a notebook computer, a PDA or a tablet PC having the IR module **211** and the WiFi module **230** and the transmitting party's second electronic apparatus **250** may be configured as a smart phone, a mobile phone, a notebook computer, a PDA or a tablet PC having only the IR module **251**.

[0106] Furthermore, although the first and the second electronic apparatuses **210** and **250** have been illustrated and explained as including only the first and the second WiFi modules **230** and **270** for transmitting and receiving the WiFi signal as a second wireless module for wireless internet, respectively, the exemplary embodiments is not limited thereto. For example, the first and the second electronic apparatuses **210** and **250** may further include first and second LTE modules (not shown) to transmit and receive a LTE signal for wireless internet. In this case, the first controller **245** may control a voltage of the WiFi modules **230** and **270** and/or the first and second LTE module in the first voltage value if determining that the received IR signal or data signal is a normal signal, and in the second voltage value if determining that the received IR signal or data signal is an abnormal signal.

[0107] Also, although the first and the second electronic apparatuses **210** and **250** have been illustrated and explained as including only the first and the second IR modules **211** and **251** for transmitting and receiving the IR signal as a first wireless signal corresponding to the user's input, respectively, the exemplary embodiments is not limited thereto. For example, the first and the second electronic apparatuses **210** and **250** may include first and second Bluetooth modules (not shown) for transmitting and receiving a Bluetooth as the first wireless signal instead of the first and the second IR module **211** and **251**, or both the first and the second IR module **211** and **251** and the first and second Bluetooth module. In this case, the abnormal signal determining operations of the first and the second signal analyzers **215** and **255** and the voltage control operation of the first and the second controllers **245** and **285** for the first and/or the second WiFi modules **230** and **270** may be perform in the same method and principle as explained with reference to the first and the second IR modules **211** and **251**.

[0108] According to the exemplary embodiments as described above, the electronic apparatus **110**, **210** or **250**, the wireless signal receiving method thereof and the system **100** or **200** having the same transmits and receives a content, a command or data by using the first wireless signal, such as the IR or Bluetooth signal, and the second wireless signal, such as the WiFi or LTE signal. If receiving the first wireless signal, the electronic apparatus **110**, **210** or **250** determines whether the received first wireless signal is a normal signal, and adjusts a voltage supplied to the WiFi module **130**, **230** or **270** and/or the LTE module in a first voltage value if determining that the received first wireless signal is the normal signal and in a second voltage value lower than the first voltage value if determining that the received first wireless signal is an abnormal signal. Accordingly, the electronic apparatus **110**, **210** or **250**, the wireless signal receiving method thereof and the system **100** or **200** having the same can prevent a problem in that when the IR receiver or module **111**, **211** or **251** and/or the Bluetooth module receives the first wireless signal, such as the IR or Bluetooth signal, the first wireless signal is distorted due to an interference by the WiFi module **130**, **230** or **270** and/or the LTE module for transmitting and receiving the second wireless signal, such as the WiFi or LTE signal, thereby resulting in malfunctions or errors in data reception.

[0109] Although a few exemplary embodiments have been shown and described with reference to the accompanying drawings, it will be appreciated by those skilled in the art that changes may be made in these exemplary embodiments without departing from the principles and spirit of the present disclosure. Therefore, the foregoings have to be considered as illustrative only and not limited to these exemplary embodiments.

What is claimed is:

1. An electronic apparatus comprising:

a first wireless module configured to receive, or transmit and receive a first wireless signal corresponding to a user's input from, or to and from an external apparatus;

a second wireless module configured to transmit and receive a second wireless signal different from the first wireless signal via a network; and

a controller configured to determine whether the first wireless signal received by the first wireless module is a normal signal, and control a power supplied to the second wireless module, based on the determination.

2. The apparatus according to claim **1**,

wherein the first wireless module comprises at least one of an infrared (IR) module to generate an IR signal and a Bluetooth module to generate a Bluetooth signal, and

wherein the second wireless module comprises at least one of a wireless fidelity (WiFi) module to generate a WiFi signal and a long term evolution (LTE) module to generate a LTE signal.

3. The apparatus according to claim **1**, further comprising a signal analyzer to analyze the received first wireless signal.

4. The apparatus according to claim **3**, wherein the controller is configured to control the signal analyzer to analyze the received first wireless signal when the second wireless module is in operation, and determine whether the received first wireless signal is the normal signal based on the analysis.

5. The apparatus according to claim **4**, wherein the signal analyzer is configured to analyze whether the received first wireless signal has a format coinciding with a predetermined pulse format.

6. The apparatus according to claim **1**, wherein the controller is configured to adjust a voltage supplied to the second wireless module, in a first voltage value if determining that the received wireless signal is the normal signal, and in a second voltage value lower than the first voltage value if determining that the received wireless signal is an abnormal signal.

7. The apparatus according to claim **6**, wherein the first voltage value corresponds to a voltage value to normally or stably drive the second wireless module.

8. The apparatus according to claim **7**, wherein the first voltage value corresponds to a voltage value defined as a standard.